Notes from September 27 2006 GW Committee Meeting

All,

We had good discussions at our last meeting on Sept 27th regarding the scope and direction of the two projects we've embarked on. In the meeting we outlined each topic on the white board to facilitate discussion. Below are those outlines (with some edits) and following that are discussion comments and next steps.

The committee needs your participation to keep the momentum going. Please review these notes and the attached work plans and provide your comments to the project leads.

Also, please let me know if you'd like to take a more active role in either project.

Next Steps:

Emerging Contaminants Strategy to Flag and Evaluate Threats to Groundwater
– Project Leads: Michael Rochette, Alec Naugle

1. Submit comments on draft work plan & discussion notes - October 30th - (**ALL**)
2. Submit links to key references & resources – (**ALL**)
   e.g., ***GRA Symposium "Emerging Contaminants in Groundwater: A Continually Moving Target***:
3. Finalize work plan based on discussion and comments by November 8th - (**Michael/Alec**)
4. Submit candidate emerging contaminants for consideration on list…current nominations include: 1,4-Dioxane, PFOA (perflorooctanoic acid), PPCPs (pharmaceuticals and personal care products), NDMA (n-nitrosodimethylamine)…- (**ALL**)
5. Submit ideas for what factors need to be considered in the threat evaluation and conceptual models (sources, source strength, occurrence, transport pathways, receptors, gw vulnerability…). These factors will also form the column headings in the summary table along with priority ranking and recommendations - (**ALL**)

Low-Risk Criteria for Solvent/Non-Fuel Sites:
– Project Leads: Kevin Brown, Brian Thompson, Alec Naugle

1. Submit comments on draft work plan & discussion notes by October 30th - (**ALL**)
2. Submit links to key references & resources – (**ALL**)
   e.g., ***Historical Case Analysis of Chlorinated Volatile Organic Compound Plumes***:
   http://www-erd.llnl.gov/library/voc/docs/MainTxt.pdf
   http://www-erd.llnl.gov/library/AR-133361.html
3. Finalize work plan based on discussion and comments by November 8th - (**Kevin/Brian/Alec**)
4. Prepare draft criteria and flow chart to better visualize project scope and problem areas by November 30th - **(Kevin/Brian/Alec)**
5. Submit examples of low-risk solvent sites that you have worked on or know about (Site name, location, active/closed) – **(ALL)**

Topic One: <u>Emerging Contaminants Strategy to Flag and Evaluate Threats to Groundwater</u> – Project Leads: Michael Rochette, Alec Naugle

Project Goals:

1. Evaluate and Prioritize Treats to Groundwater
2. Develop Proactive Strategy
3. Provide Tools for Water Board and other Agency Staff

Approach:

Task 1 Prepare Workplan

Task 2 Develop Summary Document

- 2a. Define scope of project, terms such as "emerging contaminant" and "threat", and summarize other efforts/resources
- 2b. Develop list of ECs and/or EC groups
- 2c. Prepare fact sheet introducing project goals and scope for outside distribution
- 2d. Identify key elements to characterization threat
  - i. Sources and source strength
  - ii. Groundwater Occurrence (e.g. Aquifer vulnerability)
  - iii. Mobility (e.g. Receptor Pathways)
  - iv. Threats (e.g. Human, Ecological, Nuisance)
- 2e. Prioritize/Score ECs within Regional Groundwater context
- 2f. Recommend Strategies, Identify and Assess options for implementation
- 2g. Prepare document/table summarizing ECs, key elements considered, priority ranking, and recommendations
- 2h. Prepare specific EC fact sheets

Task 3 Develop Implementation Plan

- 3a. Identify specific options to implement recommendations
- 3b. Assess options
- 3c. Select option(s)

Task 4 Implement Plan & Follow-up

<u>Comments/Discussion:</u>

- This topic is focused on threats to groundwater. Although many ECs are identified in surface water and waste water, we're only concerned with them to the extent that they are likely to impact groundwater via surface/waste water sources for example.

- Consider preparing an initial status update or fact sheet (i.e., Task 2c) once we've identified the list of ECs we plan to address. That way, others will know about our project and can offer assistance/information.

- Mention key references and resources in the work plan to help set the stage. For example, GRA symposium materials from June 2006 symposium, USGS work on topic, etc.

- Consider developing conceptual model(s) showing how ECs threaten gw resources (i.e., sources, occurrence, transport pathways, receptors, etc.) as basis for threat evaluation and priority ranking. CMs could be specific to a particular EC or group of ECs or could be generalized to cover many ECs/groups.

- Define what "threat" means. Consider source strength, groundwater vulnerability, etc…

- It's ok to recommend the need to collect missing information. An important benefit of this project will be to identify what we know, what we don't know, and where more information/research/action is needed.

- Consider threat and risk from the point of view of the operating drinking water system

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5. Submit ideas for what factors need to be considered in the threat evaluation and conceptual models (sources, source strength, occurrence, transport pathways, receptors, gw vulnerability…). These factors will also form the column headings in the summary table along with priority ranking and recommendations - (**ALL**)

Topic Two: Low-Risk Criteria for Solvent/Non-Fuel Sites – Project Leads: Kevin Brown, Brian Thompson, Alec Naugle

Project Goal: Develop guidance to benefit agency resources/workload and the public and is sufficiently protective of water resources, human, and environmental health

Potential Committee role:

1. Flush out issues & scope
2. Propose draft criteria
3. Get stakeholder buy-in

Comments/Discussion:

- What is the scope of this project?
- What is the current approach at R2 and what are other agencies doing?
- Consider using the term "threat" in addition or in place of "risk" in the title for this topic…also consider expanding scope to include "non-fuel" sites rather than just solvent sites. However, most sites are solvent sites and the challenges for low-risk/threat criteria are largely due to the specific solvent plume characteristics (i.e., recalcitrance, increasing toxicity of daughter products, historic disposal practices, etc…
- Criteria should consider gw use/vulnerability. For example, in areas where groundwater is actively used, should sites even be eligible for low-risk status?
- If low-risk criteria include a path toward no further action, then should define what NFA means. It was also suggested that NFA may not mean the same thing as site or case closure, thus may want to define these terms.
- Could a low-risk "general order" be adopted with nominal requirements until NFA is achieved? Could site-specific monitoring requirements be fashioned under such an order?
- Perhaps the criteria should focus on "site management" options, rather than just low-risk. Similarly it could be termed "risk or threat-based case management criteria" (see attached figures). In that case, the criteria could address the full-range of sites from high to low risk. Such criteria would offer the benefit of providing a prioritization scheme for all sites, whereas "low-risk" criteria area aimed only at low-risk sites. The idea offocusing on low-risk sites is that by developing clear, concise, low-risk criteria would stream-line work efforts and allow regulatory staff to focus more on higher risk sites. The downside is that low-risk criteria would not offer prioritization/management assistance for the higher-risk sites. "Site management" criteria would. The downside of site management criteria however, is that it could prove difficult and get bogged down in issues related to appropriate site characterization, remediation, use of ICs, etc. Also, developing site management criteria would still include a similar level of effort to address the low-risk sites. Lastly, some would argue that we already have an adequate scheme for prioritizing/managing higher risk sites.
- Could the criteria speak to the issue of a consistent approach to site characterization, without precluding professional judgment and regulatory discretion?
- What does low-risk mean and what does it get you if your site is deemed low risk? How would it be applied?

- What are the major hurdles to accomplishing this project? Are there any potential deal-breakers to address first?
- This topic has been kicking around for several years now, but has not been accomplished…why? What are the problems?
    - Perception that solvent plumes never stabilize
    - Perceived as not being protective of drinking water resources…goes against some agency's mission to aggressively protect resource
    - Already closing sites with & w/out ICs
- There is concern with growing use of institutional controls and their lack of visibility/enforcement. Criteria should avoid addressing ICs or only in a minimal way so we don't get bogged down.

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